

# Christopher R. Culpepper

CRC3510@RIT.EDU  
(413) 376-5034

56 South St.  
Drury MA, 01343

[www.github.com/cculpepper](http://www.github.com/cculpepper)

## CAREER OBJECTIVE

To start a career in the field of Systems or Computer Engineering starting in May 2017 designing electronic hardware, Systems Engineering, or creating embedded software, preferably in Aerospace.

## EXPERIENCE

*Test Engineer Co-op* *January 2016 - May 2016*

Space Exploration Technologies, Hawthorne CA

- Created software to automate the creation of trouble reports
- Developed tests to test flight avionics hardware
- Troubleshoot issues with avionics test racks

*Systems Engineering Co-op*

*July 2013 - Present*

General Dynamics Mission Systems, Pittsfield MA

- Performed software and systems testing on weapon control software
- Managed requirements and test cases
- Developed automated testing tracker that was used to status testing progress to management

*Computer Engineering Lab Teaching Assistant*

*January 2015 - Present*

Computer Engineering Department, RIT, Rochester, NY

- Responsible for grading reports and assisting with ARM assembly and digital IC design
- Mentored new Computer Engineers in order to increase retention and create better engineers.

## PROJECTS

*High Altitude Balloon Telemetry Tracker*

- Personally developed hardware and software design and implementation
- Developing radio board to have the ability to use FSK, AFSK, or audio-based protocols
- Utilized multiple PCBs in order to separate functionality and increase reusability
- Can communicate GPS and other sensor data to the Amateur Radio APRS network

*Wideband Oxygen Sensor Controller*

- Designed, built and programmed sensor controller that measured oxygen concentration
- Incorporated PID loops to keep a sensor at a constant temperature and oxygen concentration
- Could have been calibrated to measure accurate oxygen concentrations

*Assembly Language Pong Game*

- Created a 1.5D Pong game for a school project in HCS12 assembly
- Required HCS12 assembly, PWM, ADC and digital output

*Radio-Internet Hotspot Transceiver (Multidisciplinary Senior Design)*

- Worked on a multidisciplinary group consisting of 3 EEs
- Device acts as an audio bridge between RF and the Allstar radio network
- Completing entire design process from customer requirements to prototyping and handoff.

## AWARDS & SKILLS

Eagle Scout

A+ Certified

Languages & Software:

C  
Python  
Microsoft Office  
Linux  
Kicad PCB Design Software

Visual Basic for Applications (VBA)  
VHDL  
ARM & HCS12 Assembly  
DOORs Requirement Management  
Networking Equipment Configuration

## EDUCATION

*Bachelor of Science, Computer Engineering* GPA: 3.03

Rochester Institute of Technology, Rochester NY, Expected May 2017

Interface and Digital Electronics  
Data Communication and Networks  
Introduction to Software Engineering  
Assembly Language Programming

Digital IC Design  
Cyborg Theory  
HW & SW Design for Crypto Applications  
Introduction to Harmonic and the Blues

## COMMUNITY SERVICE

*Assistant Scoutmaster at Boy Scout Troop 88, North Adams, MA*

- Mentored Scouts to achieve rank and acquire valuable life skills
- Assisted with multiple community service projects

*Radio communication at multiple road rallies*

- Operated in a high-stress environment to prevent accidents and mistakes
- Responsible for maintaining communication for racing stages and to central management
- Relayed pertinent information to competitors, stage captain and race officials

## PERSONAL INTERESTS AND HOBBIES

Amateur Radio Extra  
K2GXT RIT Amateur Radio Club  
Motorcycle and Automobile repair

Camping and hiking  
Film Photography  
Licked Thing That Was in Space